TECHNICAL DATA SHEET

# Structure Guard® -QS

## TECHNICAL DATA

**TYPICAL PERFORMANCE CHARACTERISTICS***

| CHARACTERISTICS | TEST METHOD | PERFORMANCE |
|---|---|---|
| Tensile Strength | ASTM D638 | 4,611 psi \| 31.8 MPa |
| Tensile Elongation | ASTM D638 | 2.9% |
| Flexural Strength | ASTM D790 | 9,423 psi \| 65 MPa |
| Flexural Modulus | ASTM D790 | 772.49 ksi \| 5,326 MPa |
| Compressive Strength | ASTM D695 | 14,500 psi \| 100 MPa |
| Adhesion to Concrete | ASTM D7234 | Substrate Failure |
| Adhesion to Steel | ASTM D4541 | >3,000 psi \| 20.7 MPa |

Physical properties were evaluated on compounds cured for 5 days at 77°F | 25°C @ 50% relative humidity.

**The values stated in inch-pound units are to be regarded as the standard. The values given in international system are for information only.*

## PRODUCT DATA

- **Color — White**
- **Finish — Very Smooth (Manning Coefficient: 0.009)**
- **Flash Point — > 250°F | 121°C**
- **Ratio — 3A to 1B by volume**
- **Solids — 100% (No Solvents)**
- **No VOCs**
- **Spray-applied at 80 to 125 mils | 2.0 to 3.2mm in a single pass**
- **Theoretical Coverage — 20 sq. ft. | 1.85 sq. m. @ 80 mils | 2.0mm thickness**

## CHEMICAL RESISTANCE

- **Acetic Acid (10%)**
- **Bleach**
- **Butyl Cellosolve**
- **Deionized Water**
- **Ethanol**
- **Hydrogen Sulfide ($H_2S$)**
- **Lactic Acid (10%)**
- **MEK**
- **Methanol**
- **Nitric Acid (10%)**
- **Nitric Acid (30%)**
- **Sulfuric Acid (20%)**
- **Sodium Hydroxide (50%)**
- **Toluene**
- **Trichloroethane (1,1,1)**
- **Xylene**

Resistance of Plastics to ASTM D543 Completed Chemical Reagents (listed in ASTM F1216)

QUADEX® A VORTEX COMPANY | REPAIR MATERIALS

## Quick Spray, Corrosion Resistant Epoxy Coating

### DESCRIPTION

Quadex® Structure Guard®-QS is a quick spray, 100% solids, high-build epoxy coating formulated to provide long-term corrosion protection and structural enhancement for manholes, pump stations, treatment plants or any wastewater infrastructure subject to high levels of corrosion and/or abrasion. Structure Guard-QS sets fast for a quick return-to-service in the most aggressive and turbulent environments. It finishes smooth to enhance flow and is utilized as an interior or exterior pipe lining.

### FEATURES AND BENEFITS

- **100% Solids, No VOCs**
- **Spray-applied up to 125 mils | 3.2mm in a single pass**
- **Excellent corrosion and abrasion resistance**

### CURE TIMES @ 70°F | 21°C

- **Re-coat Window — 12 hours**
- **Immersion (Aqueous) Service — 8 hours**
- **Initial cure time 12 hours**
- **Full cure time 24 hours**

### POT LIFE

@ 80°F | 27°C — 40 minutes

### PACKAGING

Structure Guard-QS is available in 4 Gallon | 18.9 Liter Kits (3 parts A, 1 part B).

### APPLICATION SYSTEMS

Single Component 70:1 Airless Spray Units

VORTEX

## WARRANTY

**Quadex, LLC warrants its products to be free of defects in material and workmanship.** Unless superseded by project specifications and terms agreed upon in writing between installer and Quadex prior to bid, if within one year from purchase, any Quadex, LLC product is proven defective, the company will replace said product or refund its purchase price at its sole discretion. The company's obligation shall be limited solely to such replacement or refund. There are no other warranties by Quadex, LLC, expressed or implied. There is no warranty if Quadex products are stored or used contrary to Quadex, LLC's written directions.

## TYPICAL COATING REQUIREMENTS

With Structure Guard®-QS, only 1 coat is needed to attain finished thickness. If additional coats are called for they must be applied before the previous coat has completely cross-linked, typically for 12 hours @ 72°F | 22.2°C (higher temperatures/ humidity will shorten this window). If re-coating is needed, brush blast before applying the next coat. Before re-coating, clean and dry surface thoroughly to remove all contamination, including amine blush or condensation. Small areas may be abraded by sanding or wire brushing.

The same requirements apply when overlapping seams of adjacent coating sections to create a continuous protective film. If the coating surface to be overlapped at the seam cannot be brush blasted, use a non-impact means, such as power brushing or sanding, to create adequate mechanical profile.

## SURFACE PREPARATION

Coating performance is largely determined by the degree of surface preparation. MORE IS BETTER.

EXISTING CONCRETE AND MASONRY substrates must be prepared in a manner that provides a uniform, sound, clean, neutralized surface with sufficient profile suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale or deposits and have a surface profile equivalent to a CSP3 to CSP5 in accordance with ICRI Technical Guideline No. 03732. This can generally be achieved by abrasive blasting, shot blasting, high pressure water cleaning, water jetting, acid etch, hot water/ steam cleaning or a combination of methods.

NEW CONCRETE AND MASONRY SUBSTRATES must be profiled, to achieve a CSP4.

STEEL surfaces may require "Solvent Cleaning" (SSPC-SP 1) to remove oil, grease and other soluble contaminants. Chemical contaminants may be removed according to SSPCSP 12/NACE No. 5. Identification of the contaminants, along with their concentrations, may be obtained from laboratory and field tests as described in SSPC-TU 4 "Field Methods for Retrieval and Analysis of Soluble Salts on Substrates". Surfaces to be coated should then be prepared according to SSPC-SP 5/NACE No.1 "White Blast Cleaning" for immersion service or SSPC-SP 10/NACE No. 2. "Near White Blast Cleaning" for all other service. In certain situations, an alternate procedure may be to used such as high (>5,000 psi | 345 bar) or ultrahigh (>10,000 psi | 690 bar) pressure water cleaning or water cleaning with sand injection. The resulting anchor profile shall be 2.5-5.0 mils | 0.06 to 0.13mm and be relative to the coating thickness specified.

## MATERIAL COMPATIBILITY

Structure Guard-QS can be used in a composite system with Quadex Mortar Materials.